Index to InTech, Vol 28, 1981

ANNUAL INDEX

Articles	Issue, Page
Instrumentation in Conservative Industries: Posing for Pictures or Pursuing Profits?	Jan 9
Close to Home	Jan 33
Trying to Save Energy? Don't Neglect Your Process Heaters	Jan 35
Alternative Energy: Sources with Strings Attached	Jan 41
Effects of Oxygen and Carbon Monoxide Control on Boiler Efficiency	Jan 45
Fire Detection: A Cause for Alarm?	Feb 9
Beneath His Dignity	Feb 47
Instrument Steps Toward Energy Conservation: Three Case Histories	Feb 49
How a Small Chemical Company Met Distributed Control	Feb 53
Surface Temperature Measurement	Feb 57
Are Your Thermocouple Isolators Keeping Pace with Demands of Digital Systems?	Feb 63
Instrumentation for Wastewater Treatment	Mar 7
A Certain Uncertainty	Mar 33
Guide to Selecting Alarms and Annunciators	Mar 35
Save Energy by Optimizing Your Boilers, Chillers, and Pumps	Mar 45
Use Crosscorrelation for Reliable Detection of Pulverized Coal Combustion	Mar 53
What's Needed at the Man/Machine Interface?	Mar 59
Distributed Control: It Isn't Just Big	Apr 9
By the Numbers	Apr 33
Fiber Optic Communications for Data Acquisition and Control	Apr 3
A Fiber Optic Link for High-Speed Data Transmission	Apr 43
Integrated Optical Circuits	Apr 49
Resource Recovery: Is It Something for Nothing?	May 9
How to Quash a Project	May 33
Choose Controls for Scrubber and Combustion System Performance	May 35
New Luminescence Techniques Simplify Air Analysis	May 45
Sensors for Wastewater Plant Control: What Works and What's Needed	May 51
Overcoming a Batch Upset to a Continuous Process	May 55
What You Should Know about Clamp-on Ultrasonic Flowmeters	May 59
Strategic Planning for the Instrument Market: Evening the Odds	Jun 9
Information for Engineers: A Preference for Informal Channels	Jun 14
Hard Times: Getting More for Your R&D Money	Jun 21
Something For Everyone	Jun 43
Guide to Selecting Distributed Digital Control Systems	Jun 45
Standards for Distributed Control Interfaces: Are They Practical?	Jun 57
Centralized vs Distributed Controls: A Cost Comparison	Jun 61
What Do You Have to Know About Serial Data Communication	Jun 65
On-Stream Analyzers: An Update	Jul 9
Pulp and Paper Instrumentation: Focus on Energy	Jul 22
Communication by Clothesline	Jul 43
Using On-Stream X-Ray Fluorescence for Slurry Composition Analysis	Jul 45
Getting Our Feet Wet in Digital Boiler Control: A Utility Case History	Jul 49
Digital Control: What It Meant in One Boiler House	Jul 55
Efficiency Audits Can Guarantee Continuing Energy Savings	Jul 59
Fiber Optics Couplers: Opportunities for Technology Transfer	Aug 9
The Rankine File	Aug 33
Optimizing Fractionation Performance through Advanced Control	Aug 35
Cut the Cost of Calibrating Your Chromatograph	Aug 41
Three Moisture Measurement Techniques: A Comparison	Aug 43
Some Rules of Thumb for Using On-Line Mass Spectrometry	Aug 45
Marketing Myopia Revisited	Sep 9
Alarms and Annunciators: Technology Alert	Sep 16
More Responsibility, More Capacity	Sep 26
The Wheat from the Chaff	Sep 49
Programmable Controllers: Systems of Choice for Power Plant Wastewater Treatment	Sep 51
Programmable Controllers Improve Batch Digester Performance	Sep 57
Operator Interfaces for Programmable Controllers	Sep 63
Adding Software to P&IDs	Sep 67
Get Corrosion under Control with On-Stream Instrumentation	Sep 71
Process Liquid Chromatography: The Next Step in On-Stream Analysis	Sep 77
Computer Control for Discrete Production Processes	Sep 81
Why Don't Your Instrument Systems Operate as You'd Expected?	Sep 83
The Talent Pool: Who Will Solve Tomorrow's Problems?	Oct 9
Standards from Oz	Oct 33
Guide to Selecting Strip and Circular Chart Recorders	Oct 35
Analyzing Turbomachinery Problems: Sometimes a Signature is not Enough	Oct 53
Automated Data Qualification	Oct 59
Sampling Systems: Necessary Goods and Evils	Nov 9
How It Works	Nov 45
Using Computers Effectively for Maintenance Management	Nov 49
Digital Control System User Interfaces: The Same but Different	Nov 55
How to Organize Process Information for CRT Display	Nov 59
Voice Data Entry Can Improve Operator Performance	Nov 63
Process Control Programming Language Standards: Accomplishments and Challenges	Nov 67
Improve Memory Usage by Compressing Programmable Controller Logic	Nov 73
Fire-Safe Valves: Marketing Myth or Technical Truth	Dec 9
Test Your Strength	Dec 33
Guide to Selecting Rotary Control Valves	Dec 35
Controlling Distillation Processes for Fuel-Grade Alcohol	Dec 47
Control Alternatives for Industrial Boilers	Dec 53
Performance Standards for Combustible Gas Detectors: Why and to What Effect	Dec 65

AUTHOR INDEX

Authors	Issue, Page
Arant, J B	Dec 9
Baker, A T	Sep 51
Barron, G R	May 55
Bley, R E	Nov 49
Blum, D	Aug 41
Brower, R W	Oct 59
Brown, J T	Feb 49
Bushnell, G	Sep 71
Callahan, J A	Dec 65
Campbell, B D	Mar 59
Congdon, P	Dec 53
Cooper, G	Sep 71
Cooper, H R	Jul 45
Crabtree, J H	Aug 41
Dobrowolski, M	May 9, Jun 14, Jun 45, Jul 22, Sep 16, Oct 35, Dec 35
Doering, G E	Sep 81
Dukelow, S G	Jan 35
Dyer, D F	Jan 45
Erickson, I L	Jun 61
Fancy, S A	Mar 7
Forman, E R	Nov 73
Funk, G L	Aug 35
Gauther, R A	Feb 57
Good, R R	Oct 59
Goodrich, Jr, L D	Oct 59
Gooze, M	Jun 65
Grimm, R P	May 35
Grinker, J R	May 51
Grunza, E F	Nov 63
Gumpert, R	Aug 43
Harrison, T J	Nov 67
Hedrick, J	Jun 57
Hoskins, W W	May 35
Huff, W J	Jul 59
Igla, N E	Nov 73
Jandorf, B M	Jul 55
Jasper, M T	Jan 45
Jones, C D	Feb 53
Jutila, J M	Jan 9, Mar 35, Jul 9, Nov 9
Krigman, A	Jan 33, Feb 9, Feb 47, Mar 33, Apr 31, Apr 9, May 33, Jun 43, Jul 43, Aug 9, Aug 33, Sep 49, Oct 33, Nov 45, Dec 33
Lagana, Jr, T	Nov 55
Liptak, B G	Mar 45
Little, Jr, R R	Apr 43
Longrigg, P	Mar 53
Mahrenholz, B G	Apr 43

(continued on page 74)

Index to InTech, Vol 28, 1981

ANNUAL INDEX

Articles	Issue, Page
Instrumentation in Conservative Industries: Posing for Pictures or Pursuing Profits?	Jan 9
Close to Home	Jan 33
Trying to Save Energy? Don't Neglect Your Process Heaters	Jan 35
Alternative Energy: Sources with Strings Attached	Jan 41
Effects of Oxygen and Carbon Monoxide Control on Boiler Efficiency	Jan 45
Fire Detection: A Cause for Alarm?	Feb 9
Beneath His Dignity	Feb 47
Instrument Steps Toward Energy Conservation: Three Case Histories	Feb 49
How a Small Chemical Company Met Distributed Control	Feb 53
Surface Temperature Measurement	Feb 57
Are Your Thermocouple Isolators Keeping Pace with Demands of Digital Systems?	Feb 63
Instrumentation for Wastewater Treatment	Mar 7
A Certain Uncertainty	Mar 33
Guide to Selecting Alarms and Annunciators	Mar 35
Save Energy by Optimizing Your Boilers, Chillers, and Pumps	Mar 45
Use Crosscorrelation for Reliable Detection of Pulverized Coal Combustion	Mar 53
What's Needed at the Man/Machine Interface?	Mar 59
Distributed Control: It Isn't Just Big	Apr 9
By the Numbers	Apr 33
Fiber Optic Communications for Data Acquisition and Control	Apr 3
A Fiber Optic Link for High-Speed Data Transmission	Apr 43
Integrated Optical Circuits	Apr 49
Resource Recovery: Is It Something for Nothing?	May 9
How to Quash a Project	May 33
Choose Controls for Scrubber and Combustion System Performance	May 35
New Luminescence Techniques Simplify Air Analysis	May 45
Sensors for Wastewater Plant Control: What Works and What's Needed	May 51
Overcoming a Batch Upset to a Continuous Process	May 55
What You Should Know about Clamp-on Ultrasonic Flowmeters	May 59
Strategic Planning for the Instrument Market: Evening the Odds	Jun 9
Information for Engineers: A Preference for Informal Channels	Jun 14
Hard Times: Getting More for Your R&D Money	Jun 21
Something For Everyone	Jun 43
Guide to Selecting Distributed Digital Control Systems	Jun 45
Standards for Distributed Control Interfaces: Are They Practical?	Jun 57
Centralized vs Distributed Controls: A Cost Comparison	Jun 61
What Do You Have to Know About Serial Data Communication	Jun 65
On-Stream Analyzers: An Update	Jul 9
Pulp and Paper Instrumentation: Focus on Energy	Jul 22
Communication by Clothesline	Jul 43
Using On-Stream X-Ray Fluorescence for Slurry Composition Analysis	Jul 45
Getting Our Feet Wet in Digital Boiler Control: A Utility Case History	Jul 49
Digital Control: What It Meant in One Boiler House	Jul 55
Efficiency Audits Can Guarantee Continuing Energy Savings	Jul 59
Fiber Optics Couplers: Opportunities for Technology Transfer	Aug 9
The Rankine File	Aug 33
Optimizing Fractionation Performance through Advanced Control	Aug 35
Cut the Cost of Calibrating Your Chromatograph	Aug 41
Three Moisture Measurement Techniques: A Comparison	Aug 43
Some Rules of Thumb for Using On-Line Mass Spectrometry	Aug 45
Marketing Myopia Revisited	Sep 9
Alarms and Annunciators: Technology Alert	Sep 16
More Responsibility, More Capacity	Sep 26
The Wheat from the Chaff	Sep 49
Programmable Controllers: Systems of Choice for Power Plant Wastewater Treatment	Sep 51
Programmable Controllers Improve Batch Digester Performance	Sep 57
Operator Interfaces for Programmable Controllers	Sep 63
Adding Software to P&IDs	Sep 67
Get Corrosion under Control with On-Stream Instrumentation	Sep 71
Process Liquid Chromatography: The Next Step in On-Stream Analysis	Sep 77
Computer Control for Discrete Production Processes	Sep 81
Why Don't Your Instrument Systems Operate as You'd Expected?	Sep 83
The Talent Pool: Who Will Solve Tomorrow's Problems?	Oct 9
Standards from Oz	Oct 33
Guide to Selecting Strip and Circular Chart Recorders	Oct 35
Analyzing Turbomachinery Problems: Sometimes a Signature is not Enough	Oct 53
Automated Data Qualification	Oct 59
Sampling Systems: Necessary Goods and Evils	Nov 9
How It Works	Nov 45
Using Computers Effectively for Maintenance Management	Nov 49
Digital Control System User Interfaces: The Same but Different	Nov 55
How to Organize Process Information for CRT Display	Nov 59
Voice Data Entry Can Improve Operator Performance	Nov 63
Process Control Programming Language Standards: Accomplishments and Challenges	Nov 67
Improve Memory Usage by Compressing Programmable Controller Logic	Nov 73
Fire-Safe Valves: Marketing Myth or Technical Truth	Dec 9
Test Your Strength	Dec 33
Guide to Selecting Rotary Control Valves	Dec 35
Controlling Distillation Processes for Fuel-Grade Alcohol	Dec 47
Control Alternatives for Industrial Boilers	Dec 53
Performance Standards for Combustible Gas Detectors: Why and to What Effect	Dec 65

AUTHOR INDEX

Authors	Issue, Page
Arant, J B	Dec 9
Baker, A T	Sep 51
Barron, G R	May 55
Bley, R E	Nov 49
Blum, D	Aug 41
Brower, R W	Oct 59
Brown, J T	Feb 49
Bushnell, G	Sep 71
Callahan, J A	Dec 65
Campbell, B D	Mar 59
Congdon, P	Dec 53
Cooper, G	Sep 71
Cooper, H R	Jul 45
Crabtree, J H	Aug 41
Dobrowolski, M	May 9, Jun 14, Jun 45, Jul 22, Sep 16, Oct 35, Dec 35
Doering, G E	Sep 81
Dukelow, S G	Jan 35
Dyer, D F	Jan 45
Erickson, I L	Jun 61
Fancy, S A	Mar 7
Forman, E R	Nov 73
Funk, G L	Aug 35
Gauther, R A	Feb 57
Good, R R	Oct 59
Goodrich, Jr, L D	Oct 59
Gooze, M	Jun 65
Grimm, R P	May 35
Grinker, J R	May 51
Grunza, E F	Nov 63
Gumpert, R	Aug 43
Harrison, T J	Nov 67
Hedrick, J	Jun 57
Hoskins, W W	May 35
Huff, W J	Jul 59
Igla, N E	Nov 73
Jandorf, B M	Jul 55
Jasper, M T	Jan 45
Jones, C D	Feb 53
Jutila, J M	Jan 9, Mar 35, Jul 9, Nov 9
Krigman, A	Jan 33, Feb 9, Feb 47, Mar 33, Apr 31, Apr 9, May 33, Jun 43, Jul 43, Aug 9, Aug 33, Sep 49, Oct 33, Nov 45, Dec 33
Lagana, Jr, T	Nov 55
Liptak, B G	Mar 45
Little, Jr, R R	Apr 43
Longrigg, P	Mar 53
Mahrenholz, B G	Apr 43

(continued on page 74)

Authors	Issue, Page
Maples, G	Jan 45
Maxwell, T T	Jan 45
McAvoy, T J	Oct 9
McCallister, R A	Jan 41
McKeown, M	Aug 45
Meagher, R F	May 51
Melville, H J	Sep 57
Miller, Jr, T E	Sep 77
Miller, J G	Jun 9, Sep 9
Moon, J	Jun 57
Muller, G	Oct 53
Nelson, F	Jun 65
Pakulis, I E	Aug 43
Purvis III, J R	Jun 61
Rahoi, R J	Sep 51
Robinson, W B	Mar 59
Rogers, R D	Jul 49
Sanik, P S	Feb 63
Schaldach, M K	Sep 63
Schmidt, T R	May 59
Shinskey, F G	Dec 47
Shirley, R S	Mar 59
Smith, D E	Aug 35
Stecker, W	Sep 67
Stenby, E W	May 35
Suppo, M J	Jul 59
Taylor, A	Jun 21
Trover, W F	Apr 33
Tucker, T W	Nov 59
Turpen, B L	Sep 83
Verber, C M	Apr 49
Vo-Dinh, T	May 45
Williams, J D	Jul 49

SUBJECT INDEX

Subject	
academic/industrial interactions	Oct 9
actuators	Jan 9
ADA	Nov 67
advanced control	Jan 9, Aug 35
air analyzers	May 45
air pollution control	May 35
alarms	Mar 35, Mar 59, Sep 16
alcohol distillation control	Dec 47
analog control	Jun 45
analytical instruments	Jul 9, Aug 41
annunciators	Mar 35, Sep 16
approvals	Dec 9
automation	Jan 9
ball valves	Dec 35
BASIC	Nov 67
batch digester control	Sep 57
batch process control	Feb 53, Sep 81
batch processing	May 55
blowdown control	Dec 53
boiler control	Jul 49, Jul 55, Dec 53
boiler efficiency	Jan 45
boiler optimization	Mar 45
butterfly valves	Dec 35
calibration	Aug 41
carbon monoxide control	Jan 45
cascade control	May 55
centralized control	Jun 45, Jun 61
certification	Dec 65
chart recorders	Oct 35
chemical processing	Feb 53
chiller optimization	Mar 45
chromatography	Sep 77
coal combustion control	Mar 53
combustible gas analyzers	Dec 65
combustion control	Jan 35, Jan 45
combustion sensing	Mar 53
combustion systems	May 35
communications	Apr 33
composition analyzers	Jul 9, Dec 65
compressor monitoring	Oct 53
computer applications	Nov 49
computer control	Mar 7, Jun 57, Aug 35
computer interfaces	Mar 59
computer languages	Jul 43
computers	Sep 81, Nov 55
continuous processing	May 55
control valves	Dec 9, Dec 35
corrosion control	Sep 71
corrosion monitoring	Sep 71
CRT consoles	Nov 59
data acquisition	Apr 33, Jul 49
data analysis	Oct 59
data collection	Oct 35
data communication	Apr 43, Jun 65
data qualification	Oct 59
digital communications	Jun 65
digital control	Jun 45, Jun 61, Jul 49, Jul 55, Aug 35, Sep 67, Nov 55, Nov 67
digital instrumentation	Feb 63
discrete production control	Sep 81
displays	Mar 59, Sep 16
dissolved oxygen sensors	May 51
distillation	Dec 47
distributed control	Feb 53, Apr 9, Jun 43, Jun 45, Jun 57, Jun 61, Nov 55
documentation	Nov 55
doppler flowmeters	Sep 67
electrical isolation	Feb 63, May 59
electro-optics	Apr 33, Apr 49
energy alternatives	Jan 41
energy audits	Jul 59
energy conservation	Jan 35, Jul 22, Aug 35
energy efficiency	Jul 59
energy management	Feb 49, Mar 45
energy recovery	Jan 41, May 9
excess oxygen control	Feb 49
feedwater control	Dec 53
fiber optics	Apr 33, Apr 43, Aug 9
fire detection	Feb 9
fire safety	Jan 33
fire-safe valves	Dec 9
flowmeters	May 59
fluorescence spectrometry	May 45
food processing industry	Jan 9
FORTRAN	Nov 67
fractionation column control	Aug 35
fuel efficiency	Jan 45
furnace safety	Mar 53
gas chromatography	Aug 41
glass industry	Feb 49
heat recovery	Jan 35
high-speed transmission	Apr 43
industrial/academic interactions	Oct 9
information sources	Jun 14
innovation	Feb 47, May 33
instrument functions	Nov 45
instrument installation	Sep 83
instrument maintenance	Sep 83
instrument market	Jun 9, Sep 9
instrument performance	Sep 83
instrument selection	Sep 83
instrumentation system economics	Jun 61
integrated control	Jun 45
interfacing	Jun 57
ion chromatography	Sep 77
liquid chromatography	Sep 77
logic circuits	Nov 73
luminsecence analyzers	May 45
maintenance	Jul 59, Oct 53
maintenance management	Nov 49
man-machine interface	Oct 59
man-machine interfaces	Nov 59
man-machine interfaces	Mar 59
mass spectrometry	Aug 45
measurement validation	Oct 59
microprocessors	Apr 9, Jun 43
modems	Jun 65
modular software	Sep 67
moisture analysis	Aug 43
monitoring	Mar 35
noise immunity	Apr 33
nonintrusive flowmeters	May 59
on-stream analysis	Sep 77, Nov 9
on-stream analyzers	Mar 7, Jul 9, Jul 45, Aug 35, Aug 45
operator interfaces	Mar 35, Mar 59, Sep 16, Sep 63, Nov 55, Nov 63
operator training	Feb 53
optical circuits	Apr 49
optical couplers	Aug 9
optical data processing	Apr 49
optimization	Mar 45, Aug 35
oxygen control	Jan 45
P&IDs	Sep 67
phosphorimetry	May 45
plug valves	Dec 35
point tags	Nov 59
pollution abatement	Jan 45
pollution control	Mar 53
pollution monitoring	May 45
power plant instrumentation	Sep 51
power plants	Jul 49
process analyzers	Aug 45
process heaters	Jan 35
process interfaces	Nov 59
productivity	Aug 33
programmable controllers	Sep 51, Sep 57, Sep 63, Sep 81, Nov 73
programming languages	Nov 67
project management	May 33, Jun 21, Jul 43
protocols	Jun 65
pulp and paper control systems	Sep 57
pulp and paper industry	Jul 22
pump optimization	Mar 45
quality control	Nov 63
Rankine cycles	Jan 41
real-time correlation	Mar 53
recorders	Oct 35
reliability	Jun 61, Jul 49
research and development funding	Jun 21
resource recovery	May 9
rotary valves	Dec 35
RTDs	Feb 57
safety	Mar 35
sampling systems	Nov 9
scrubbers	May 35
sensors	Jan 9, May 51
serial communications	Jun 65
shrink and swell	Dec 53
signal isolation	Apr 33
signal transmission	Apr 33
simulation	Aug 35, Sep 51
sludge monitoring	May 51
slurry measurement	Jul 45
smoke detection	Jan 33, Feb 9
software standards	Nov 67
spectral analysis	Oct 53
stack gas cleanup	May 35
standards	Jun 57, Oct 33, Dec 65
strategic planning	Jun 9, Sep 9
surface sensors	Feb 57
technical papers	Sep 49
technical writing	Apr 31
technology transfer	Feb 47, Aug 9
temperature	Feb 57
temperature measurement	Feb 63
thermocouples	Feb 57, Feb 63
training	Oct 9
transit time flowmeters	May 59
turbochemistry	Oct 53
ultrasonic flowmeters	May 59
user/vendor interactions	Mar 33, Nov 45
utility boilers	Jul 49
valves	Dec 9, Dec 35
vapor pressure measurement	Dec 47
vendor/user interactions	Mar 33, Nov 45
vibration sensing	Oct 53
voice data entry	Nov 63
voluntary standards	Oct 33
wastewater treatment	Mar 7, May 51, Sep 51
water treatment	May 55
waveguides	Apr 49
X-Ray fluorescence	Jul 45